

CLAIMS

What is claimed is:

1. A method for monitoring vehicle violations at a railroad crossing, the method comprising the steps of:
 - providing a first video camera at the crossing;
 - using a processor to monitor information from the railroad crossing to
 - 5 determine when a traffic violation has likely occurred; and
 - when a violation has likely occurred, presenting video of the violation occurring to a system operator via a display screen;
 - providing an input interface for the operator to confirm that a violation
 - 10 has occurred; and
 - when the operator confirms that a violation has occurred via the interface, at least one of generating a citation and storing a video clip of the violation for subsequent use.
2. The method of claim 1 wherein crossing control equipment is provided at the railroad crossing and the step of using a processor to monitor includes determining when a vehicle passes through the railroad crossing after the control equipment has indicated that traffic therethrough should cease.
3. The method of claim 1 wherein the step of at least one of generating and storing includes both generating and storing.
4. The method of claim 1 wherein the step of providing an input interface includes providing a single selectable button that indicates confirmation and monitoring the button for selection.
5. The method of claim 1 further including the step of, after video of a violation is commenced, monitoring the input interface for an indication that the operator is observing the video.

6. The method of claim 5 further including the steps of recording the time and duration of the violation as well as the time at which an operator indicates that the operator starts observing a video.

7. The method of claim 6 wherein the step of generating a citation includes printing on the citation the time at which a violation commenced and the time at which the operator indicated that the operator commenced observing the violation via the display.

8. The method of claim 7 wherein the step of generating a citation further includes printing on the citation the duration of the violation.

9. The method of claim 3 wherein the step of storing a video of a violation includes correlating the video with a unique tag number and storing the correlated tag number and video in a database and wherein the step of generating a citation includes printing the tag number on the citation.

10. The method of claim 9 further including the step of providing a computer network cite for reviewing violation videos and, when the cite is accessed and a specific video tag number is entered, replaying the video via the computer network.

11. The method of claim 1 wherein the display and the input interface are provided at an operator's workstation and wherein the method further includes the steps of providing a second video camera at the operator's station to record the operator's activities as well as the images presented on the display and temporally correlating video from the first and second cameras.

12. The method of claim 4 wherein the step of generating a citation includes indicating the identity of the confirming operator on the citation.

13. The method of claim 1 wherein the step of providing a video camera at the railroad crossing includes providing a video camera at each of the plurality of railroad crossings, the step of using a processor to monitor information from the crossing to determine when a traffic violation has likely occurred includes using a processor to monitor information from each of the plurality of crossings and, the step of presenting video includes the step of, when a violation has likely occurred at any of the plurality of locations, presenting video of the violation occurring to a system operator.

14. The method of claim 1 wherein the processor is linked to a license-network address database, the method further including the step of, when a violation occurs, identifying the license plate number of a vehicle in which the violation occurred, using the license plate number and the database to identify the vehicle owner's network address and issuing a notice of the violation to the vehicle owner via the network address.

15. The method of claim 14 further including the step of, when the notice is issued, providing a link within the notice that enables the owner to hyperlink to the stored video clip that shows the violation in progress.

16. A method for monitoring vehicle violations at a location, the method comprising the steps of:

specifying a traffic violation that may occur at the location;

providing a video camera at the location;

5 using a processor to monitor information from the location to determine when a traffic violation has likely occurred; and

when a violation has likely occurred, presenting video of the violation occurring to a system operator.

17. The method of claim 16 further including the step of confirming via the presented video that a violation has occurred and issuing a citation when a violation has occurred.

18. The method of claim 16 wherein equipment used to present the video is used to present other information in addition to the video and wherein the method further includes the step of, when a violation likely occurs while other information is being presented by the equipment, replacing at least a subset of the other

5 information with the video.

19. The method of claim 16 wherein the step of specifying a traffic violation that may occur at the location includes specifying traffic violations that may occur at a plurality of different locations, the step of providing a video camera at the location includes providing a video camera at each of the plurality of locations, the step of
5 using a processor to monitor information from the location to determine when a traffic violation has likely occurred includes using a processor to monitor information from each of the plurality of locations and, the step of presenting video includes the step of, when a violation has likely occurred at any of the plurality of locations, presenting video of the violation occurring to a system operator.

20. The method of claim 16 wherein, prior to the occurrence of a violation, the method includes presenting essentially real time video of at least a subset of the information recorded by the video cameras at the plurality of different locations to the operator for observance.

21. The method of claim 20 wherein the equipment used to present the video includes at least one screen and the step of presenting real time video includes, for each location, providing video on at least one of the screens.

22. The method of claim 21 wherein one of the screens is a primary screen and wherein the step of presenting the video of a likely violation includes presenting the video via the primary screen.

23. The method of claim 16 further including activating an alarm proximate the operator when a violation has likely occurred.

24. The method of claim 23 wherein the alarm is one of an audible alarm and a visual alarm.

25. The method of claim 16 further including the step of confirming via the video that a violation has occurred.

26. The method of claim 25 further including the step of providing a confirming input device for the operator to confirm when a violation has occurred.

27. The method of claim 26 further including the step of monitoring the input device for confirmation from the operator and, when the operator confirms that a violation has occurred, generating a citation consistent with the violation that occurred.

28. The method of claim 27 wherein the citation indicates that the operator witnessed the violation.

29. The method of claim 27 further including the step of, when the operator confirms that a violation has occurred, storing a video clip that includes the violation for subsequent use.

30. The method of claim 16 wherein the location is a railroad crossing and the violation specified is an illegal crossing.

31. The method of claim 16 wherein the step of using a processor to monitor includes using the processor to analyze video information from the location.

32. The method of claim 31 wherein the step of using a processor to monitor includes sensing the status of other information in addition to the video information at the location and using both the video information and the other information to determine if a violation has likely occurred.

33. The method of claim 32 wherein the location is a railroad crossing including crossing lights that flash to indicate that traffic should halt and wherein the other information includes the status of the crossing lights.

34. An assembly for monitoring vehicle violations at a railroad crossing, the assembly comprising:

a video camera at the crossing;

a video display screen;

an input interface;

a processor receiving information from the railroad crossing and programmed to perform the steps of:

determining when a traffic violation has likely occurred;

when a violation has likely occurred, presenting video from the camera of the

violation occurring to a system operator via the display screen; and

monitoring the input interface for an indication confirming that a violation has occurred.

35. The assembly of claim 34 further including a database, the processor programmed to perform the step of, when a violation is confirmed, storing a video clip of the violation in the database.

36. The assembly of claim 34 wherein the processor is further programmed to perform the step of, when a violation is confirmed, provide an image of a citation via the screen for the operator to observe.

37. The assembly of claim 36 further including a printer, the processor further programmed to perform the step of, when a violation is confirmed, printing a citation via the printer.

38. The assembly of claim 36 wherein the citation indicates the identity of the operator.

39. The assembly of claim 35 further including a printer, the processor further programmed to perform the step of, when a violation is confirmed, print a citation via the printer.